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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/402,185 | 03/25/2002 | Karl-Erik Knipstrom | C36305 | 6575 |

7590

05/06/2003

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EXAMINER

MCHENRY, KEVIN L

ART UNIT

PAPER NUMBER

1725

DATE MAILED: 05/06/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/402,185

Applicant(s)

KNIPSTROM ET AL.

Examiner

Kevin L McHenry

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10 and 1.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Specification

1. The abstract of the disclosure is objected to because on line 9 "the" needs to be capitalized since it is starting a sentence. Correction is required. See MPEP § 608.01(b).

2. The disclosure is objected to because of the following informalities:

The specification does not include headings for the various sections, such as "Background of the Invention", "Brief Summary of the Invention", "Brief Description of the Drawings", and "Description of the Preferred Embodiments".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 recites the limitation "the workpieces" in line 2 of claim 1. There is insufficient antecedent basis for this limitation in the claim. For examination purposes the examiner interpreted this language to mean "workpieces".

6. Claim 8 recites the limitation "the workpieces" in line 2 of claim 8. There is insufficient antecedent basis for this limitation in the claim. For examination purposes the examiner interpreted this language to mean "workpieces".

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 2, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Spinella et al. (U.S.P. 5,829,664).

Spinella et al. teach a friction stir welding process in which workpieces to be welded are positioned on a work table and are clamped together and on a table by a clamping means. A rotating weld means is moved along a joint between the workpieces while being pressed against the workpieces (see U.S.P. 5,829,664; particularly Figure 1; column 1, lines 5-9, 65-67; column 2, lines 1-7, 45-49). Additional heat in excess of the frictional heat generated is supplied to the weld joint through electrical resistance heating. This heating is in addition to the frictional heat provided by the welding tool. Heat from the electrical resistance heating can be supplied during welding by using heating through the rotating welding tool or prior to welding by using an electrode that

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advances ahead of the tool (see U.S.P. 5,829,664; particularly column 1, lines 10-15, 32-45, 65-67; column 2, lines 1-7; column 3, lines 16-25).

Allowable Subject Matter

9. Claims 3-7 and 9-12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest a friction stir welding method or apparatus in which additional heat that is in excess to the heat supplied by a rotating weld tool is supplied to the weld joint prior to and/or during the welding operation, wherein a heating element is positioned underneath the weld joint for heating the weld joint.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stol et al. (U.S. 2002/0125297) is cited of interest for illustrating the state of the art in friction stir welding methods with heating means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin L McHenry whose telephone number is (703) 305-9626. The examiner can normally be reached on M-F.

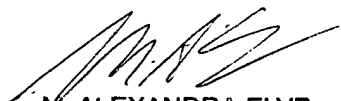
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G Dunn can be reached on (703) 308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



April 23, 2003



M. ALEXANDRA ELVE
PRIMARY EXAMINER